

Cancer survivors at higher risk of hospitalization or dying from flu

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Survivors from a wide range of cancers are more likely than people in the general population to be hospitalised or die from seasonal influenza even several years after their cancer diagnosis, according to new data published in *EClinicalMedicine*.

Given that flu and COVID-19 are both epidemic respiratory viruses with broadly similar risk factors, the findings suggest that [cancer survivors](#) are also likely to be at raised risk of severe COVID-19 outcomes.

With over two million [cancer](#) survivors in the UK, the researchers say their results highlight that this group may need to be prioritised for vaccination against both diseases.

In the first large study of its kind looking at this issue, researchers from the London School of Hygiene & Tropical Medicine (LSHTM), analysed medical records from 1990 to 2014 of more than 630,000 people in the UK, including over 100,000 survivors of a range of cancers.

Comparing the rates of influenza hospitalisation and death between cancer survivors and the cancer-free population, the researchers found that the risk of these outcomes was more than 9 times higher in survivors from lymphomas, leukaemia, and multiple myeloma, compared to those with no prior cancer. Crucially, this raised risk persisted for at least 10 years after [cancer diagnosis](#). Despite the risks being raised compared to the [general population](#), the absolute risks of developing severe flu were still relatively low, with about 1 in 1000 survivors of these types of cancer hospitalised with flu each year.

Survivors from other types of cancer also had more than double the risk of severe influenza outcomes for up to five years from diagnosis.

These findings persisted even after accounting for

other suspected risk factors such as old age, smoking, socioeconomic status, body mass index and other illnesses.

The researchers also found that cancer survivors were more likely to have other diseases that are associated with increased risk of severe COVID-19 outcomes, such as heart disease, diabetes, respiratory disease and kidney disease.

According to Gov.uk, to date 199,881 patients have been admitted to hospital in the UK with COVID-19, and there have been 63,873 COVID-19 recorded deaths. Age is by far the most important factor determining the absolute risk of developing severe COVID-19, with some studies estimating around 20% of individuals aged over 80 years old require hospitalisation, compared with less than 1% of people aged under 30.

Current guidance on who should be considered vulnerable to COVID-19 is largely based on policies developed for previous epidemic respiratory viruses like influenza. In such guidance, cancer survivors with no recent immunosuppressing treatment are not considered high-risk. However, findings from this new study—combined with other recent UK data showing that cancer survivors had a raised risk of dying from COVID-19—suggests that cancer survivors should be included as a vulnerable group for COVID-19 and influenza management policies.

Helena Carreira, one of the lead authors of the study and Research Fellow at LSHTM, said: "We knew that people with cancer are at high risk of severe outcomes from these epidemic viruses soon after diagnosis, but we found that this increased risk also continues for several years after diagnosis. This means that vaccination and other preventative strategies are important considerations for the much broader population of longer-term cancer survivors."

Professor Krishnan Bhaskaran, senior author of the

study and Professor of Statistical Epidemiology at LSHTM, said: "These findings have an immediate relevance as we enter the winter period: we have a flu vaccine available, and the likelihood of a COVID-19 vaccine in the near future. Understanding how vaccination should be prioritised to protect the most vulnerable will be crucial over the next few months."

The authors acknowledge limitations of their study, including that it is not certain that [risk factors](#) for severe influenza will have the same associations with COVID-19; and a lack of data on cancer treatments that patients had received.

More information: Carreira H, Strongman H, Peppas M, McDonald H, dos-Santos-Silva I, Stanway S, Smeeth L, Bhaskaran K. Prevalence of COVID-19-related risk factors and risk of severe influenza outcomes in cancer survivors: a matched cohort study using linked UK electronic health records data. *EClinicalMedicine*.

Provided by London School of Hygiene & Tropical Medicine

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